Assumed Transmission in Political Science: 
A Call for Bringing Description Back In

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ABSTRACT
News outlets cannot serve as reliable conveyors of social facts, nor do their audiences crave such content. Nonetheless, much political science scholarship assumes that objective information about social, political, and economic topics is routinely transmitted to the mass public through the news. This paper addresses the problem of selection bias in news content and illustrates the problem with a content analytic study of New York Times coverage given to American war deaths in five major conflicts that occurred over the past century. We find that news coverage of war deaths is unrelated to how many American combatants have recently died. News coverage is more likely to mention war deaths when reporting combat operations, and less likely to mention them when a war is going well. These findings underscore the need to document selection biases in information flows before theorizing about proximate causes underlying the relationships between political systems and public opinion.

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RUNNING HEAD
Assumed Transmission in Political Science Research
Walter Lippmann (1922: 164) long ago chided those students of politics who assumed that “men took in their facts as they took in their breath.” The problem, Lippmann pointed out, is that facts have no wings. They must be transmitted through space and time, a process traditionally carried out by the mass media. But news outlets have neither incentive nor ability to serve as reliable conveyors of social facts. Nor do their audiences crave such content. News outlets, as Lippmann pointed out, serve their own logic, and the logic of the news business creates important limits to both what can be broadly known through the news and who is likely to know it.

This observation remains unheeded in many areas of political science research. A wide range of political science scholarship still proceeds as if mass publics responded to “real world” events and conditions. Few individuals have a direct view of events, and so most people respond instead to the mediated realities constructed for them by news outlets (e.g., Dunaway, Branton, and Abrajano 2010; Gilens 1999; Jerit, Barabas, and Bolsen 2006). Information technologies are now so tightly woven into the fabric of daily life that communication scholars can seriously discuss the “mediation of everything” (Livingstone 2009), and yet many areas of political science research still proceed as if the mediation process itself can be ignored or assumed away.

Political science scholarship that touches on public opinion processes often assumes that social, political, and economic facts are routinely transmitted to the mass public, presumably through mainstream media channels. For instance, scholars of American politics often use economic indicators to predict presidential support without considering how these indicators are framed or passed along to the public (e.g., MacKuen, Erikson, and Stimson 1992; Nadeau and Lewis-Beck 2001). Assuming rather than analyzing the transmission of facts reduces the analytical problem to empirically assessing whether the dynamics of objective facts known to the researcher correlate with the dynamics of measured opinions or behaviors. But this simplifying assumption ignores the problem of selection bias in the information conveyed to mass audiences. News media tend to present a view of reality filtered by criteria of newsworthiness, the organizational routines for
gathering newsworthy information, and the economic incentives of the news business. These factors systematically distort the transmission of factual information and may create a disjuncture between objective, ‘real-world’ indicators and the information that is made available to mass publics through informational media.

A sizeable literature confirms that news coverage provides a highly selective account of reality (e.g., Danzger 1975; Jackman and Boyd 1979; Dixon and Linz 2000; Dearing and Rogers 1996; Franzosi 1987; for recent reviews, see Earl et al. 2004; Gilliam et al. 1996; Myers and Caniglia 2004; Ortiz et al. 2005; Woolley 2000). Yet many research literatures in political science still proceed as if the news media provides a sort of “magic mirror” service for the mass public that is not in itself worthy of attention or concern. The statistical models used in many public opinion studies often include “objective” covariates like economic indicators or casualty counts that are used to predict values of dependent variables derived from surveys of individual citizens. This modeling choice assumes that the survey respondents have unobstructed access to the facts being modeled, even though exposure to these facts is rarely confirmed. This choice also requires assuming that the facts are communicated widely enough in a society that they could serve as a proximal influence on changes in public opinion. If either assumption fails to hold, then the meaning of any statistical relationship between factual inputs and attitudinal outputs must be held in doubt until alternative mechanisms of influence can be identified. The practical upshot of unobserved selection bias affecting the information conveyed to mass publics will be misleading analyses and flawed theories.

This paper examines the problem of selection bias in news coverage with a content analytic study on the ways that war casualties have been communicated to American citizens through the news. Since the publication of John Mueller’s (1973) innovative work on war and public opinion, it has become an article of faith among scholars of international relations and public opinion that the willingness of citizens to support wars is shaped by information about the human costs of war. A scholarly consensus has emerged that the dynamics of American war support appear to be driven by
a sort of cost-benefit calculus (e.g., Eichenberg 2005; Larson 1996; Larson and Savych 2005). The number of war deaths suffered by American forces plays an important (albeit contested, e.g., Berinsky 2007; Gelpi, Feaver, and Reifler 2005) role at the heart of this calculus.

Empirically, we know that popular support for war tends to decrease as war deaths increase (e.g., Mueller 1973, 2005). Theoretically, the war support literature often interprets this pattern as evidence that the American public perceives fewer benefits from war as its human costs mount. This presumed relationship is usually tested with aggregate data, using time-series models predicting war support as a function of the actual occurrence of American war deaths, or with experiments that ensure subjects are exposed to casualty information (e.g., Gartner 2008; Gelpi 2010). However, ordinary Americans learn about casualties not from time-series datasets or from experimental interventions but from news coverage.

Our analysis of casualty reporting from World War I through the Iraq War shows that the amount of newspaper attention to the human costs of war has remained remarkably stable over the past century. Roughly nine in ten newspaper stories about war avoid even passing reference to American deaths, a figure that varied hardly at all from World War I through Vietnam. Mentions of military losses became slightly less infrequent during the Iraq War, when only eight in ten war-related stories ignored American deaths. In contrast to the typical expectation that public support for war should be sensitive to incremental changes in casualty numbers, our analysis finds that high numbers of deaths tend to trigger no unusual attention to casualties in news reports. More important, when a war is going well and prospects for eventual victory are bright, news stories become less likely to mention American war deaths at all, regardless of actual casualty rates. When America suffers setbacks, news coverage focuses more attention on the human cost of war. None of these relationships have ever been anticipated in the war support literature.

This content analytic study on communicating the costs of war illustrates an important problem affecting a wide range of political science research. Because the news making process is so complex,
and because the content of news coverage is simultaneously shaped by multiple factors that condition one another in unpredictable ways, there is no general theory of news selection that could be applied to predict or correct distortions in the way media coverage reflects aspects of reality that might interest political scientists. An understanding of biases in the transmission process must grow from descriptive analysis of the information flows that are actually reaching the mass public. Only when this basic descriptive research is completed can the insights from political communication scholarship be used to understand why the news selects some aspects of reality as newsworthy while ignoring or neglecting others. Once understood, these dynamics can be explicitly modeled in a wide range of political science research that has mistakenly assumed that the mediation of reality in the news is a simple mirroring process.

**Factors Influencing Selection Bias in News Coverage**

Political scientists are now beginning to recognize a variety of factors that contribute to selection bias in news coverage. Political communication theories addressing selection biases in the newsmaking process include Entman’s (2003) cascading activation model, Bennett’s (2004; Bennett, Lawrence, and Livingston 2007) indexing model, and Wolfsfeld’s (2004) press-media-politics model. All three models recognize that because there is no simple explanation for why the news reports what it does, it is difficult to generalize about what kinds of stories will be covered in what ways under what conditions. Rather than making predictions about specific topics likely to be covered in the news, these three models seek instead to document general tendencies in news coverage produced by the complex arrangement of interdependent systems, structures, and influences that jointly shape the selection of news stories. These models in turn draw from a large and venerable literature that details a number of enduring influences on news selection. We focus on six factors among these enduring influences that are important for understanding selection bias in news coverage: the current political context, the institutional focus and geographic structure of the
newsgathering system, the nature of the news event, audience tastes, news values that structure mainstream news reporting, and the fixed size of the news hole for traditional media.

The Current Political Context

Journalists come to define newsworthiness against a backdrop of changing perceptions about what is politically important and changing expectations about what is likely to happen next. Political context therefore has an important role to play in news story selection (e.g., Rosenstiel 2005; Schiffer 2008). The climate of opinion among elites and the mass public steers news organizations toward reporting stories that derive their news value against the backdrop of current perceptions (e.g., Bennett 1996; Gitlin 1980; Hallin 1986). The apparent newsworthiness of a political decision or event can therefore vary across time and across different political contexts. In this way, journalistic perceptions of newsworthiness are constantly reshaped by changing perceptions of “what’s current” in politics at the local, regional, national, and international levels.

The Institutional Focus of the Newsgathering System

Newsgathering is an inherently uncertain business, because it is often difficult to anticipate what each day’s news will be. The reporter who returns from an assignment empty handed is a major risk for news outlets that must maximize the efficient allocation of costly newsgathering resources. This concern has evolved a newsgathering system that maximizes the potential for generating useful news on a continual basis (e.g., Cook 2005; Sigal 1973; Sparrow 1999). The newsgathering system can be thought of as a net that concentrates journalistic resources at institutional sites known to reliably generate newsworthy stories (Tuchman 1978). The main strands of the news net intersect at strategically important locations—primarily, governmental institutions designed to register and solve social problems—and consist of beat reporters from wire services and national news outlets (e.g., Kaniss 1991; Molotch and Lester 1974). By “routinizing the unexpected” (Tuchman 1973), institutional tracking allows news organizations to produce a predictable and steady stream of
useable news stories without exposing those organizations to the potential risk of coming back empty-handed at the end of the day.

Shadowing the activities of key government institutions allows news organizations to make news cheaply and efficiently, but these gains come at a cost. While institutional tracking systems thoroughly document the activities of governing officials, they tend to neglect or ignore other potentially important stories that fail to ring institutional alarm bells. In this way, the activity of elected political leaders focuses news attention on some stories and away from others by providing cues about newsworthy topics. The practical upshot is known as “indexing” by the news: when it comes to political issues, news comes to be defined as whatever public institutions with power are talking about at a given moment (e.g., Bennett 1990; Hallin 1986). Institutional silence is taken by journalists as a signal that a topic is unworthy of news attention.

*The Geographic Structure of the Newsgathering System*

Besides shadowing the activities of key actors in governing institutions, the newsgathering system also concentrates journalistic resources in particular parts of the country and world where newsworthy events are expected to routinely occur (e.g., Kaniss 1991; Tuchman 1978). The uneven geographical allocation of newsgathering resources produced by the structure of the news net generates disproportionate news attention for a small number of central cities and strategically important countries (e.g., Schiff 1996; Wu 2000). As a result, important stories occurring in places far from permanent news bureaus are less likely to be reported than those that occur nearby (e.g., Bendix and Liebler 1999; Branton and Dunaway 2009; Martin 1988). For example, protests are more likely to generate news coverage when they occur in cities that have a wire service office (Danzger 1975). So story selection is influenced not only by whatever problems are being actively debated by political leaders but also by whatever problems are afflicting a small number of key countries and major cities where news organizations have committed scarce newsgathering resources.
The Nature of the News Event

To be reported as news, any potential story topic must first usually take the form of an event that happens in time and space. As Lippmann (1922: 216) noted, “the news is not a mirror of social conditions, but the report of an aspect that has obtruded itself.” Usually, the obtruding aspect of social reality must be an event that is noticed by governing institutions at the intersecting strands of the news net. It is the occurrence of an event rather than merely the existence of an underlying problem that triggers news attention. Such events are often called “news pegs” because they provide an anchoring rationale on which to hang subsequent news coverage. News pegs provided by governing institutions are an important determinant of news attention because it is more efficient for news organizations to passively track institutions than to independently investigate social trends or problems on their own (e.g., Sigal 1973; Gans 1979).

“Routine events” like press conferences and public speeches generate news pegs that prompt beat reporters to write stories about the topics that newsmakers are promoting. In addition to these routine events, reporters also find particular value in a second category of “accidental events” that attract the notice of social institutions but are not created by newsmakers to promote an institution’s issue agenda (Molotch and Lester 1974). Accidental events include natural disasters, scandals, crimes and domestic or international crises. Dramatic and unexpected events allow reporters to break away from the typical constraints imposed by the institutional news net (e.g., Lawrence 1996; Bennett and Lawrence 1995). Accidental events empower journalists to define the news on their own terms, to glimpse how institutions respond to problems when the veil of spin is temporarily lifted, and to verify claims made by political leaders about the nature of social problems as well as the ability of those leaders to solve the problems (Bennett, Lawrence, and Livingston 2007). For this reason, news organizations often perceive accidental events to be even more newsworthy than routine events.
Audience Tastes

The news is a business, and like any other, the economic incentives and constraints inherent in newsmaking influence which stories are selected for publication (Baker 2002). Because most of the revenue in the news business comes from advertising, news content is selected to hold the attention of large and demographically desirable audiences such as women and younger people (Hamilton 2004; Napoli 2003). As a result, news content tends to highlight topics that interest these economically desirable audience segments and to ignore topics that risk alienating these groups.

More generally, the limited interest that mass-circulation audiences have shown for political topics tends to produce news coverage that tries to be interesting without being offensive or hard to understand. News organizations therefore become wary of covering stories that risk boring the audience or that demand more effort to understand than audiences are predisposed to give.

The profitability of mass-audience news outlets hinges not on retaining the small but loyal audience of news junkies, but on attracting a larger and more lucrative marginal audience of people who are somewhat indifferent about public affairs news (Hamilton 2004). Facts that upset these audiences will tend to be underreported (e.g., Aday 2010), and stories that risk alienating them will be passed over quickly to emphasize the content that they find interesting (Zaller 1999). At the same time, the need to hold the interest of marginal audiences can come into conflict with the tendency to report on whatever governing institutions happen to be talking about, which adds to the unpredictability of news content.

News Values that Structure Mainstream Reporting

News is defined not only in its proximity to where beat reporters happen to be in the news net, but also more generally in terms of what journalists call “news value” (e.g., Gans 1979; Graber 2009; Wolfsfeld 2004). Standard elements of “news value” include timeliness (news is something that just happened), novelty (news is something that is unusual or out of the ordinary rather than typical and expected), geographic proximity (news is something that happens close to where audiences reside),
familiarity (audiences are more interested in the doings of familiar persons like the president or Hollywood stars than of abstract social trends or anonymous institutions like Congress), audience impact (audiences are more interested in things that affect them directly and in important ways than in things that have a tangential relationship to daily life), and drama (dramatic stories are more interesting to follow and conflict stories are more easily told). News organizations use these values as a triage system to determine which among several potentially newsworthy stories they should cover. The more news value a story has—that is, the more of these elements present in a given story topic—the more likely it will be reported.

Each of the news values contributes to selection bias, but drama and novelty are especially important (e.g., Weaver et al. 2007; Wolfsfeld 2004). Conflicts between powerful leaders, groups, or countries will tend to be reported more heavily than other topics lacking dramatic conflict. And since there are more conflicts than journalists could possibly cover, the news value of these conflicts is often shaped by their perceived novelty. For example, despite the prevalence of dramatic civil wars, humanitarian crises, and ethnic cleansing campaigns in the African continent, American news media tend to ignore Africa altogether as a source of international news (Golan 2008). The reason seems to be that such dramatic events are more common in Africa than in other parts of the world, and this greatly reduces the news value of reporting on “yet another crisis” in a crisis-prone continent.

The centrality of drama and novelty as news values is closely tied to the need for attracting and holding the attention of politically ambivalent marginal audiences. A Gresham’s Law in mainstream news coverage is the typical result: unusual and dramatic stories tend to receive more coverage than routine and sedate stories, thereby reducing the overall amount of sober coverage given to unexceptional but nonetheless important aspects of public affairs like legislative policymaking.

Fixed Size of the News Hole for Traditional Media

If the time or space in which to report the news was unlimited, then even stories possessing few elements of news value might still be reported. In such a case, the carrying capacity of any outlet’s
news agenda would be equal to the number of stories produced by its reporting staff in a given news cycle. This is how the news agenda is constructed in many Internet news outlets. However, television broadcasts and printed newspapers are different. These traditional outlets have a fixed amount of time or space for reporting news that must be shared with the advertising that finances newsgathering activities (e.g., Hamilton 2004; Picard 1989). A certain number of newspaper pages and minutes per hour on television must be devoted to ads, and the size of the “news hole”—the remaining amount of time or space set aside for news items—is usually invariant over the short run regardless of what’s happening on a given day. On slow news days, the reporting staff may scramble to find enough items to fill the news hole. On busy news days, editors and producers must make difficult choices about which newsworthy stories must go unreported due to constraints on the time or space available for transmitting news reports. The relatively fixed size of the news hole is therefore an important factor producing selection bias in news coverage (e.g., Fogarty 2005; Haider-Markel, Allen, and Johansen 2006; Nam 2006; Ortiz et al. 2005).

News organizations sometimes precommit sections of the news hole to an ongoing topic. News reports that address the latest development in a long-running saga such a war, scandal, or a high-profile legislative debate are known as “continuing stories” (Molotch and Lester 1974). When continuing stories are allocated a regular space in the news hole, the amount of coverage that can be devoted to other topics is reduced. Within the portion of the news hole set aside for a continuing story, only the most newsworthy dimensions of the continuing story will be reported.

A Content Analytic Study on Communicating the Costs of War

The previous section identified some of the main factors that drive news selection effects. But identifying factors does not help us forecast how those factors will shape the reporting of a given story or topic. In part this is because so little descriptive research has been done on most areas of news attention that political communication scholars have no clear idea how selection biases in the reporting of facts and events might vary by topical area. In part this is because the news selection
process is dynamic and complex, with multiple influences joining together at different stages to direct journalistic attention away from some issues and toward others. The inherent unpredictability of the news selection process underscores why it is important for political science research to empirically describe a given transmission process before proceeding to the theory-testing stage.

Understanding how an event affects public opinion requires understanding how that event is communicated to the mass public. War offers a prime example of the need for doing so, since few citizens directly experience a military conflict, yet their mediated experience of war has important implications for public policy and public opinion. Although the political science literature on popular support for war implies that references to American war deaths in the news should closely follow the actual number of recent war deaths, the literature on selection bias in the news suggests a different set of expectations.

Few leaders are likely to benefit politically by focusing institutional attention on American military losses while a war is raging. The institutional focus and geographic structure of the newsgathering system suggests that if government and military leaders aren’t actively debating the human costs of war, then news media are unlikely to draw attention to those costs unless other factors intervene to increase the newsworthiness of the topic (e.g., Aday 2010; Cobb 2007). Although it is difficult to anticipate all the conditions that might prompt journalists to highlight the costs of war even when those costs are not being actively debated by civilian and military leaders, four factors seem especially plausible.

First, because wars are treated as continuing stories, news outlets will tend to reserve a portion of their news hole for daily updates on the war. The rigid structure of the news hole may leave little room for news coverage of casualties to vary as a function of the number of war deaths. To the contrary, as casualties become a routine part of war coverage, journalists should tend to reserve a regular (and probably small) amount of the news hole for casualty stories as one among many war-related topics competing for coverage.
Second, novelty as a news value should regulate news attention to casualties independently of elite debate in at least two ways. American casualties will be an unusual and therefore newsworthy topic at the outset of a war, regardless of what elites are talking about. But as the war continues, additional deaths become routine features of the ongoing conflict, diminishing their novelty and potential newsworthiness in the eyes of journalists. So news coverage of casualties should wane with elapsed time in a war. In addition, the news value of novelty should also produce reporting that is more sensitive to trends in casualty rates than to actual numbers of casualties, even in periods with steady losses, and even if those losses involve large numbers of American dead. Increases in casualty rates should be relatively more dramatic than decreases in casualty rates. As a result, news coverage may be especially likely to mention American war deaths when casualty rates are rising (that is, when new casualty information is both novel and dramatic), and relatively less likely to mention American losses when casualty rates are falling (that is, when new casualty information may be novel but relatively less dramatic).

Third, the current political context of a war, in combination with audience tastes regarding war coverage, could influence whether and how news coverage mentions casualties (e.g., Wolfsfeld, Frosh, and Awabdy 2008). A long line of literature suggests that critical war reporting is kept in check by the tastes of audiences who prefer positive or neutral coverage of an ongoing war to negative coverage. As a result, news of war is rarely critical about the justifications for war and tends to avoid coverage of friendly war deaths altogether (e.g., Aday 2005; Bennett, Lawrence, and Livingston 2007; Carruthers 2000; Knightley 2004; Hallin 1986; Mermin 1999). Against this backdrop, the public support for war literature expects that as political leaders become divided over the merits of war, news coverage should become more critical toward the war (e.g., Berinsky 2009; Hallin 1986; Larson 1996; Zaller 1992). It is likely that such critical coverage might include more attention to the human costs of war. However, since elite divisions should be more likely the longer a war goes on, in practice it becomes difficult to separate the effects of elite opinion on war coverage.
independently from the effects of mounting numbers of cumulative casualties, or any other factor that is correlated with the passage of time (e.g., Lai and Reiter 2005). We therefore examine a different indicator of current political context: signals carried in news coverage about whether a war is likely to be won or lost (Feaver and Gelpi 2004; Gelpi, Feaver, and Reifler 2005, 2009). The prior literature has neglected how cues about the likelihood of eventual victory are conveyed in the news, and so we have no directional expectations for this relationship. But it seems plausible that current perceptions about whether the war can be won—shaped by elite cues and carried into the news through indexing—provide an important context for assessing the newsworthiness of additional casualties.

Finally, because some aspects of war are inherently more dramatic than others, the relative availability of dramatic war stories should influence what information about the conflict appears in the portion of the news hole devoted to war coverage. Stories describing combat operations should be especially dramatic relative to other aspects of war that might be reported. Given a fixed amount of space or time for reporting the day’s war news, dramatic stories about combat operations should tend to crowd out stories about other aspects of war, such as developments on the home front or routine speeches by war leaders. To the extent that war deaths are covered in their own stories, heightened news attention to combat operations could displace casualty coverage within the daily news hole. However, because most war deaths result from fighting, it may be that descriptions of combat operations should tend to mention casualties. If so, then heightened attention to combat operations could increase the likelihood that casualties are mentioned in the news. For this reason, while combat coverage should have a bearing on casualty coverage, we have no directional expectations for the relationship between combat coverage and mentions of American deaths.

In short, we do not expect to find support for the conventional view implied by the war support literature that mentions of American losses in the news should be positively related to the actual numbers of recent war dead. In contrast, we expect that:
• Attention to American losses should be relatively stable within wars, regardless of the actual numbers of recent casualties.

• Attention to American losses in the news should be more frequent earlier than later in a war, and when the number of American war deaths is rising more than when it is falling.

• Attention to American losses should be related to current assessments of the likelihood of eventual victory.

• Attention to American losses should be related to the proportion of daily war stories describing combat operations.

**Data Sources for Newspaper Coverage**

We used a stratified random sampling procedure to select every war-related story in sampled days of *New York Times* coverage from World War I, World War II, the Korean War, the Vietnam War, and the Iraq War. Because the topical agenda of national news outlets is fairly homogenous, the *Times* is often used as a proxy to represent larger trends in national news content (e.g., Danielian and Reese 1989; Golan 2006). Few Americans read the *Times* directly, but it is one of the few American newspapers available in electronic form all the way back to the early days of the 20th century, and the only newspaper with an index covering the entire period that can be used to authoritatively identify the population of war-related stories.

Following standard procedures for daily newspapers (Riffe, Aust, and Lacy 1993; Riffe, Lacy, and Fico 1998: 97-101), we sampled one constructed week of coverage for each year of a war using a random sample of days across elapsed months within wars. Our sampling strategy randomly captures roughly every 60th day of each war, rotating through the days of the week, which results in larger subsamples for longer wars. Data reported in this paper include 10 randomly sampled days of news coverage yielding 160 war-related stories from the period of American involvement in World War I (April 2, 1917 to November 11, 1918), 20 sampled days yielding 737 war-related stories from the
period of American involvement in World War II (December 7, 1941 to September 2, 1945), 18 days yielding 214 stories from the Korean War (June 25, 1950 to July 25, 1953), 49 days yielding 509 stories from the Vietnam War (considered to have begun with the Gulf of Tonkin resolution, passed on August 7, 1964, and to have ended on March 29, 1973, when American combat troops left South Vietnam), and 28 sampled days yielding 357 war-related stories from the Iraq War (March 19, 2003 through November 1, 2006, when we began collecting data for this project).

With the final sample in hand, we used the New York Times Index to identify all war-related stories published on each sampled day. We then coded every war story within each day using full-text, scanned images of news stories obtained from ProQuest’s Historical New York Times database. All war-related content was included in the analysis, including editorials and opinion columns, but excluding letters to the editor since the Times Index only began listing all letters to the editor in the mid-1980s (Althaus, Edy, and Phalen 2001). This procedure identified a total of 1,977 war stories published in the 125 days sampled for the present analysis.

Within each war-related story, coders recorded every mention of war deaths among friendly forces, as well as whether the story included numerical data on cumulative deaths or mentioned trends in numbers of recent deaths. Stories coded as mentioning casualties were not necessarily stories “about” casualties, though many were. Mentions of casualties captured by our coders therefore range from long numerical reports of recent battle casualties to brief, offhand remarks about “our losses” in editorials or op-ed articles. Coders also noted when stories described combat operations. To assess story-level cues about the likelihood of eventual victory, five coding categories were developed to capture different types of information relevant to the likely outcome of a war: the apparent military power of enemy forces, the apparent military power of allied forces, a measure of which side had the military initiative, a measure assessing which side was likely to win the war, and a measure of whether the story contained mostly good news or bad news for the US and its allies. Separate coding variables were collected using these five measures, but a principal components
analysis later revealed a single factor solution with strong loadings for all five items (Eigenvalue = 2.86). As a consequence, we scaled all five variables to a common metric (after reverse-coding the enemy strength variable) and averaged them into an aggregated estimate of the war’s likely outcome (Cronbach’s alpha = .81). This combined measure of the likelihood of victory runs from –1 to +1, with negative values representing an anticipated defeat and positive values indicating a likely victory.

Because of the complex alliances that the United States made in each of these wars, we considered friendly deaths as losses incurred either by American forces or by the forces of its allies. For instance, coders were instructed to count reports of British casualties during World War II or ARVN forces during the Vietnam War as mentions of friendly casualties. In practice, however, despite casting a broad net we found that nearly all mentions of friendly casualties made during periods of American involvement referred to U.S. casualties alone—few stories mentioned casualties of allied nations without also mentioning American losses. For this reason, throughout the analysis that follows we consistently refer to friendly deaths as American deaths.

Five coders carried out the content analysis after extensive training and reliability testing. A final reliability test using five coders and 161 stories was conducted prior to the start of the initial data collection process. After the initial data collection process, a second round of reliability testing was conducted using two coders and the 192 stories that included numerical or individual references to American dead (another 18 stories made other types of references and were not included in this test). Average pairwise agreement across coders ranged from 87% to 97% across the nominal-level variables used in this analysis, with minimum pairwise agreement ranging from 74% to 87% across all combinations of five coders. The interval-level likelihood of eventual victory measure had an average pairwise correlation of .80 across coders, and a minimum pairwise correlation of .70. We also calculated intercoder reliability statistics, which represent the percent agreement above what can be expected by chance (additional details on agreement and intercoder reliability measures are available in the online appendix). All content variables used in this analysis have acceptable levels of
intercoder reliability, achieving at least a .70 level of reliability with either Brennan and Prediger’s (1981) kappa or Krippendorff’s (2004) alpha, as appropriate.

**Data Sources for American War Deaths**

Trends in Korean War deaths were derived from the Korean Combat Casualty File, 1950-57, while those for the Vietnam War come from the Southeast Asia Combat Area Casualties File. Casualty data for the Iraq War comes from official Department of Defense data compiled by the Iraq Coalition Casualty Count web site (www.icasualties.org). Trends in American deaths from World War I and World War II were estimated from government casualty reports published regularly in the *Times*. See the online appendix for details on how trend data for the world wars were compiled.

**What Drives Coverage of American War Deaths?**

Although friendly casualties play a central role in most studies of public support for war, we find that news coverage rarely mentions those casualties. War news contained no mention of American fatalities on 20% of sampled days. On days when American deaths were noted, such references were often brief and most stories made no mention of them at all. Across all five wars, American war deaths were mentioned in an average of 1.7 stories per day (out of an average of 15.8 war-related stories per day), which means that only 11% of war-related stories on an average day made even passing reference to American deaths.

Figure 1 presents the percentage of war stories from each conflict that made at least passing reference to American war deaths. Overall news attention to American deaths has increased somewhat over the past century. American losses were noted in nearly one in five war-related stories from the Iraq War, compared to only one in 10 stories from World War I. Yet the types of casualty information assumed by political scientists to influence public support for war were rarely published in *Times* coverage. Out of the nearly 2,000 stories in our sample, only 41 mentioned the cumulative number of American deaths since the start of a war, and only 16 explicitly compared numbers of American deaths across time within a war. Figure 1 shows just how rare these types of references
are: on average across the five wars, only 2% of war-related stories mention cumulative deaths, and less than 1% of stories mention numerical trends in American deaths. With regard to reporting trends in American losses over time, further analysis shows that only 13% of sampled days across the five wars contained such information, and in every case those few days contained only a single story that compared losses at different points in time within a war.

INSERT FIGURE 1 ABOUT HERE

With regard to cumulative death tolls, before the Iraq War only 15% of sampled days contained a story that mentioned the total number of American losses since the start of a war. Only one of these sampled days had more than one story that mentioned the cumulative death toll. In contrast, during the Iraq War, cumulative American losses were noted in 64% of sampled days, and one third of these cases were days that contained more than one story mentioning the cumulative death toll (four sampled days contained two stories that mentioned cumulative deaths, while one sampled day contained four such stories). But of the 25 Iraq War stories mentioning cumulative deaths, two thirds (n = 16) were “Names of the Dead” casualty lists rather than regular news stories. This means that even during the Iraq War, typical readers would be unlikely to come across mentions of cumulative casualties unless they were in the habit of reading “Names of the Dead” lists, brief items that in our sample were usually buried in the middle of the first section (mean page number = 12). If we set such lists aside, only 3% of the remaining war-related stories and 25% of sampled days during the Iraq War mentioned cumulative losses.

In short, reporting of trend data on American deaths remains just about as rare today as it was during World War I. And although Iraq appears to stand out in Figure 1 as having more than three times the attention drawn to cumulative deaths than in previous wars, this is mainly an artifact of the Times having adopted a new convention to report cumulative deaths when publishing “Names of the Dead” lists. Setting those lists aside, information about cumulative losses was just about as hard to find during the Iraq War as during previous conflicts.
Part of the reason for similar numbers of casualty mentions across wars has to do with the size of the news hole devoted to war coverage by the Times. Aside from World War II, when the Times ran an average of 36.9 stories about the war per sampled day (s.d. = 9.6), each of the other four wars was allocated roughly the same-sized daily news hole: an average day’s news from the period of American involvement in World War I contained 16.0 war-related stories (s.d. = 5.8), which was about the same as in the Korean War (mean = 11.9 war-related stories, s.d. = 5.2), the Vietnam War (mean = 10.4, s.d. = 5.1), and the Iraq War (mean = 12.7, s.d. = 10.8). When World War II is omitted from the comparison, a one-way analysis of variance for the daily number of war-related stories across the other four wars reveals no statistically significant differences, $F(3, 102) = 1.95, p = .13$. This suggests that the fixed size of the news hole may go a long way toward accounting for the similarities in casualty mentions across wars shown in Figure 1.

It is also notable that the relatively larger news hole allocated by the Times to World War II coverage did not produce increased attention to war-related deaths. To the contrary, the average number of stories per sampled day that mentioned American losses was quite similar across all five wars: 2.2 stories per day from World War II mentioned U.S. war deaths (s.d. = 2.1), compared to 1.6 from World War I (s.d. = .97), 1.1 from the Korean War (s.d. = 1.1), 1.3 from the Vietnam War (s.d. = 1.0), and 2.5 stories per day from the Iraq War (s.d. = 2.4). A one-way analysis of variance for daily number of stories mentioning American losses across wars confirmed a significant difference, $F(4, 120) = 3.61, p < .01$, but post hoc contrasts showed that only the differences between Iraq and Vietnam and between Iraq and Korea were statistically significant. Not only did the Times set aside a fixed amount of news space for war coverage generally, the Times also reserved a relatively fixed amount of that news space for stories mentioning war deaths. Quite in keeping with standard news practices and probably unrelated to any editorial stance about these wars, this tendency placed a filter on casualty news so that it became a small and relatively stable component of coverage across wars despite the wide variance in losses actually sustained in these wars.
To determine what drives newspaper coverage of casualties, we now turn to a regression analysis that predicts mentions of American deaths in the news. Because cumulative deaths and casualty trend comparisons are so rarely included in *Times* coverage, no multiple regression analysis could be conducted on those types of casualty references. Our analysis considers instead any reference to American deaths, no matter how brief or indirect. As a check on the robustness of our findings, we conduct the regressions at the level of individual stories (using logistic regression) and at the level of sampled days (using OLS regression) from across the five wars.

Following the lead of previous war support studies (e.g., Gartner 2008; Gartner, Segura, and Wilkening 1997), we coded the *marginal number of American deaths* (in hundreds) occurring in the 30 days leading up to the date of each story as well as the *trend in marginal deaths*, coded –1 if the marginal number of American deaths were falling relative to the previous 30-day period, +1 if marginal deaths were rising, and 0 if the marginal death trend was stable. Because we expected that the relative novelty of casualties should have an important bearing on the likelihood of casualty coverage, our models include a counter for *elapsed time since the start of American involvement* equal to the number of years (measured in daily increments) since the United States entered each war. We also included variables capturing the *daily average likelihood of victory* score for all of the war stories published on the day any given story appeared. We included the daily average likelihood of victory score to capture the dynamic impact of particular stages of wars, since the probability of casualty coverage could be a function of how well the war is going: news media might not want to report more bad news when the outlook is grim, or conversely might not want to report depressing news of casualties when victory is in sight. Finally, we also measured the *daily percentage of stories describing combat operations* on the date a given story appeared. To control for idiosyncratic factors specific to individual wars, all of the pooled models also contain dummy variables for each war, using the earliest war in each pooled group as the reference category.
Table 1 shows how these variables affect the probability that a given story mentioned American deaths. The methods appendix contains separate models for each war as well as several alternative specifications of these models to confirm that the results presented in Table 1 are robust. The leftmost columns in Table 1 contain logistic regressions predicting mentions of American deaths within individual stories (DV coded 1 = mentions US dead, 0 = otherwise), while the rightmost columns contain OLS models predicting the proportion of war stories mentioning American deaths within sampled days (DV $M = .11$, s.d. = .31, max = 1, min = 0). Each set of columns contains three pooled models: one that combines all five wars together, one that pools just the two world wars, and one that pools just the three later wars. Two main factors warrant our attention to these pooled models, especially to differences between the two world wars and the three later wars. First, casualties rose dramatically over time during both world wars, but were less highly correlated with time among the three later wars (see Figures A1 and A2 in the online appendix). Second, news coverage of both world wars tended to be relatively optimistic about the chances of victory, whereas coverage of later wars tended to be more pessimistic (Althaus et al. 2008). These similarities suggest that the model pooling stories from the world wars and the model pooling stories from the later wars are likely to provide the strongest evidence about factors that drive coverage of American war deaths. Interested readers can also examine war-specific models in the methods appendix.

Table 1 shows that newspaper mentions of American deaths were statistically unrelated to the actual occurrence of those deaths. Neither the actual numbers of war deaths in the 30 days leading up to a story’s publication nor the trends in those deaths relative to the previous 30 days had any significant relationship with the probability of mentioning American deaths in any of the models. Although we expected that newspaper mentions of war deaths should be more sensitive to recent changes in casualty rates than to actual numbers of deaths, it appears that the news hole for casualty
information is so rigid during major wars that even casualty trends have no effect on the likelihood that deaths are mentioned in the news.

Although casualty coverage across the wars was independent of rates or trends in actual war deaths, Table 1 shows that cues about the likelihood of victory exert a strong impact on casualty coverage across wars. The level of optimism in daily coverage is negatively related to mentions of dead Americans, and this relationship is statistically significant in five of the six models (in the sixth model, it is correctly signed but only marginally significant). When the war is going well and prospects are bright for eventual victory, news stories become less likely to mention American deaths. When America suffers setbacks in battle, news attention shifts to emphasize the human cost of war. The estimated effects of this variable on the daily proportion of war stories mentioning American deaths can be read from the rightmost columns of Table 1. Although the average likelihood of victory variable theoretically ranges from −1 to +1, averaging these story-level scores produces a more compact distribution at the level of sampled days ($M = .03$, s.d. = .13, max = .46, min = −.20). When the level of optimism is set to two standard deviations above the mean, the pooled model across all wars predicts that American deaths will be mentioned in 14% fewer stories than they would be if the likelihood of victory variable were to take the neutral value of 0. At two standard deviations below the mean, the pooled model across all wars predicts that American deaths will be mentioned in 11% more stories than if cues about the likelihood of victory were evenly balanced. As the other two pooled OLS models show, the estimated effect of optimism about the war’s eventual chances of success was larger in the three more recent wars ($b = −.63$) than in the two world wars ($b = −.25$).

The daily proportion of stories mentioning combat is significantly related to whether American deaths are mentioned in the news. For the wars in Korea, Vietnam and Iraq, combat coverage is positively and significantly related to whether American dead are mentioned in the news at both the story level and the daily level. In the separate model for the two world wars, the daily proportion of
stories mentioning combat appears statistically unrelated to casualty mentions. However, further inspection reveals that the nonsignificance of this relationship in the two world wars is simply a function of the larger overall number of combat stories in those wars, the vast majority of which made no mention of casualties. Chi-square tests (not shown) of whether stories mention combat and whether they mention American deaths confirm that American deaths were disproportionately more likely to appear in combat stories during the two world wars, just as in the later wars. This relationship between casualty reports and combat coverage helps explain why the Times rarely mentions cumulative deaths or trends in recent deaths. Of the 210 stories that mention American war deaths in our sample, exactly half appear in stories that also describe combat operations. Because combat is dramatic and because battles tend to be covered as they happen (or soon after), much of the coverage given to American combat deaths comes as passing references within after-action descriptions of recent battles. The news hole therefore appears to be more open to stories about the latest fighting than to those about the scale of human destruction left in the wake of fighting.

The relationship between elapsed time and casualty mentions is more complicated. Consistent with our expectation about the news value of novelty, elapsed time in a war is negatively related to casualty mentions in four of the six models. However, none of these coefficients is statistically significant. In contrast, during the two world wars American deaths were more likely to be mentioned in the later stages of fighting (although this relationship is only significant at the story level). This could be a simple reflection of the changing scale of death in those conflicts, where most battle deaths occurred relatively late in the wars (see Appendix Figures A1 and A2). For the three more recent wars, there is no consistent relationship between elapsed time and marginal casualty rates. But the main finding from this series of coefficients is that the news value of novelty has no consistent impact on casualty coverage during major wars.

Three central conclusions emerge from the various findings reported here. First, although the international relations literature expects the public provision of numerical information about
casualties to be a major factor in eroding public support for war, this type of information is rarely ever contained in war-related coverage from what is arguably the most historically prestigious and information-rich source of national security news in the United States. Second, the amount of news coverage given to American wartime deaths in the *New York Times* has no clear or obvious connection to the actual timing or numbers of those deaths. Third, *Times* reporting of American war deaths is instead calibrated to the current prospects for eventual victory and the relative amount of daily news coverage taken up by stories describing combat operations. Even then, the amount of variance explained by the right-hand variables in our models is quite modest. In five wars distributed across nearly 100 years, the amount of news attention given to war-related death in the *Times* had little to do with the pace or scale of war-related dying.

**A Call for Bringing Description Back In**

Comparing the levels and dynamics of casualty coverage across major American conflicts of the last 100 years calls into question a wide range of assumptions common to the political science literature about dynamic influences on public opinion processes. Across five different wars, the *New York Times* reported news about war casualties in basically the same ways. Higher numbers of recent American deaths did not increase the probability that casualties would be mentioned in the news. Deaths were more likely to be reported when stories included details about combat operations. However, American losses were less likely to be mentioned when news of the day was relatively optimistic about the war’s likely chances of success. In short, these findings reveal that casualty coverage varies with the journalistic news value of American losses, rather than simply reflecting the numbers of recent American losses.

These findings confirm what the political communication subfield has long known: routine transmission of politically important information should never be assumed. The news media provide a selective account of reality, largely chosen to reflect audience tastes and journalists’ ever-shifting sense of newsworthiness. Because of this, “even the most careful and complete journalistic accounts
appear to present a partial and often biased representation of large, irregular, and important events” (Woolley 2000: 170). No researcher should ever assume that events or publicly-available information like casualty counts are covered “as is” by major news organizations (Ortiz et al. 2005). Selection biases in war coverage probably take different forms than selection biases in other types of reporting, so it would be difficult to generalize from this particular case. But this study illustrates why political scientists need to begin concerning themselves with a third type of black box problem.

The Other Problem with Black Boxes

“Black box” models of policymaking and public opinion have long been criticized for their intellectual blandness: inputs go in and outputs come out without ever delving into the between parts. What happens in the middle is what’s really interesting, but that’s precisely what “black box” models leave out. Sometimes it’s because the sausage-making process in policy institutions and individual minds is hard to observe, but often what happens in the middle is left out because data about the middle processes simply don’t exist. When this is the case, the researcher often falls back to studying covariance between the “stimulus” of objectively measured inputs and the “response” of objectively measured outputs as a way of drawing inferences about plausible but hidden pathways that might connect them.

Two kinds of black box problems are already familiar in the discipline: black boxes at the level of systems and black boxes at the level of individuals. This article addresses a third type of black box problem: uncertainty about the content and structure of informational flows that connect system-level processes to individual-level processes. The importance of studying and describing these information flows is little appreciated within our field. Their continued neglect calls into question a wide range of theories about system- and individual-level processes that are rooted in the unlikely assumption that the observable facts serving as inputs to our models are communicated widely enough through a political system that they could serve as a proximal influence on individual-level opinions.
Assuming the transmission of key facts from systems to individuals might be a reasonable methodological compromise if the transparency of the mediation process were confirmed with data. However, because content analysis is time-consuming and difficult to conduct, the mediation process is rarely studied. Aside from the challenge of measuring information flows, it also seems the case that “Social scientists involved in quantitative empirical research generally are relatively unconcerned with problems of measurement. Most prefer to get on immediately with statistical estimation and theory construction” (Franzosi 1987: 5). Statistical estimation and theory construction

By explicitly analyzing how casualty information is communicated to the American public, this study draws attention to the importance of moving past “black box” covariance models connecting systems and individuals to better understand how information flows about politics at the system level influence public reactions at the individual level. Doing so requires descriptive analysis, often in the form of case studies (e.g., Franzosi 1987; Woolley 2000). To the extent that such case studies clarify how selection biases shape the information flows connecting individuals to the systems around them, these regularities can be explicitly modeled in covariance designs and used to narrow down a feasible set of alternative explanations of what might be happening within a given black box context.

Implications for Research on Public Support for War

The findings from our content analytic study also shed light on recent theoretical disagreements in the war support literature about whether the proximal cause of changes in war support is mounting casualties (following Mueller 1973) or diminishing expectations of victory (e.g., Feaver and Gelpi 2004; Gelpi, Feaver, and Reifler 2009). This theoretical debate centers on the nature of the public’s “casualty sensitivity” and the degree to which public support for war is eroded by mounting casualties or something else that is merely correlated with casualty counts (e.g., Berinsky 2007;
Our findings question the theoretical validity of using cumulative or marginal counts of American war dead as a statistical proxy for the war costs that are actually communicated to the American public. At the same time, our findings suggest that in practice it may be hard to separate the communication of casualty information from the communication of cues about the prospects for victory, because news attention to war costs seems to vary as a function of battlefield successes. Recent work on the apparent importance of the war’s perceived success as a moderator of the public’s casualty sensitivity (e.g., Feaver and Gelpi 2004; Johnson and Tierney 2006) might therefore be focusing on the wrong variable. Because cues about the chances of eventual victory are correlated with the public visibility of American losses mentioned in the news, it might be that perceptions of success are themselves conditioned on casualty coverage. Further research that models changes in perceptions of eventual victory with changes in the provision of casualty information will be required to untangle the apparent confound between these two possible causes of over-time declines in public support for war.

At a minimum, these findings underscore previous calls to study the “flow of influence” between news coverage and public opinion in the foreign policy context (Seaver 1998). They support the view articulated by Groeling and Baum that “even after controlling for … empirical ‘reality,’ communication still plays a crucial, independent role in influencing public support for the president during foreign crises” (emphasis in original, Groeling and Baum 2008: 2-3). When communication is taken seriously, better theories result.
An online methods appendix containing robustness checks on the models reported here as well as additional details on the content analysis and casualty data is available at journals.cambridge.org/jop. Data and supporting materials necessary to reproduce the numerical results will be available upon publication at www.illinois.edu/~salthaus.

Full-text stories from Nexis-Lexis were used to code Times coverage from the Iraq War, as the ProQuest holdings ended in late 2003 at the time the coding for this project was conducted.

The authors are grateful to Scott Gartner for making these data files available to us.
References


Haider-Markel, Donald P., Mahalley D. Allen, and Morgen Johansen. 2006. Understanding variations in media coverage of U.S. Supreme Court decisions: Comparing media outlets in


Figure 1. Percentage of War Stories Mentioning U.S. or Allied Deaths, by Type of Reference

- Any Reference to U.S. Deaths
- Mentions Cumulative U.S. Deaths
- Mentions Trends in Numbers of U.S. Deaths Over Time

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Table 1. Predicting Mentions of American Deaths in War Stories

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<td>Daily Average Likelihood Of Victory (−1 - +1)</td>
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† p < .10  * p < .05

Note: All models also contain dummy variables for individual wars (not shown). Cells in the left columns contain logistic regression coefficients and cells in the right columns contain unstandardized OLS regression coefficients, with standard errors in parentheses.